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(54) DEVICE FOR STORING ARTICLES AND MAKING THEM AVAILABLE
 ONLY TO THEIR INTENDED CONSIGNEE

(71) We, LA REDOUTE, a body corporate organised under French Law as a Société Anonyme, of 57 Rue Blanchemaille, Roubaix (Nord), France, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention is concerned with a device for storing articles and making them available only to their intended consignee.

It has been proposed to operate such a device by placing each article in a marked compartment and by providing its consignee with means of fixing on the inside of the distributing appliance a reference mark which is related to the mark of the compartment enclosing the article which is to be consigned to him; comparison between this reference mark and the various compartments when the user operates the device makes it possible for each person to retrieve the article which has to go to him.

In order to prevent the consignee of an article contained in one of the compartments of the distributor retaining his possibility of access to this compartment after having taken possession of the article which was intended for him, particularly after this compartment has been reprovided with an article which is not intended for him, it has been proposed that the reference mark of the emptied compartment is modified by the action of placing a new article in it.

Such a direct action of the reference of marks of the compartments has appeared not to be very rational, on the one hand because it limited the nature of the possible means of marking the compartments, and on the other hand because it demanded handling in not very accessible zones of the machine, for example, at the back of the compartments.

According to the present invention there is provided a device for storing deposited articles so that they can be retrieved only by a

consignee offering a correct coded reference comprising:—

an endless conveyor, a driving means for propelling the conveyor, a plurality of compartments, which are normally inaccessible from the outside of the device, fixed side by side along the conveyor, each compartment being capable of receiving an article, an identifying mark associated with each compartment, means for reading the identifying marks of the compartments, the reading means being fixed relative to the conveyor so that it reads each identifying mark as the conveyor carries the compartments past the reading means, means for producing a coded reference associated with each identifying mark, means for comparing the coded reference associated with an identifying mark with a reference offered by the consignee, means for stopping the conveyor when a coded reference and the reference offered by the consignee coincide, and means for providing access from the outside of the device to the compartment associated with the identifying mark which is associated with the coded reference which coincides with the reference offered by the consignee.

Means are preferably provided to modify as desired the coded reference associated with the identifying mark of a compartment.

Accordingly, the device of the present invention is associated with a central unit having an information base which associates with each identifying mark of a compartment, which is unalterable, a coded reference in which can be altered and which is compared by means of the central unit with an offered reference which is in the possession of the consignee of the article contained in the compartment. The coded reference of a compartment is derived, for example, at the time of filling the compartment, by associating with identifying mark of the compartment with the coded reference of the consignee of the article. Modification of the coded reference is then carried out at the central unit without any intervention at the

compartments themselves, for example, by the use of a keyboard which is inaccessible to the public.

In a preferred embodiment of the invention, the device comprises a plurality of identical modules, each one of which comprises a plurality of compartments, the modules being fixed to the conveyor and positioned thereon along the direction of the motion of translation thereof.

Each module may comprise compartments of various dimensions at different levels, the wall of the device comprising at each level a door of suitable shape which is capable of giving access to one compartment of a particular level at a time. The various doors may be positioned in relation to each other so that simultaneous access to compartments at different levels is impossible and the device thus offers great security of use.

The invention is described in more detail in the following description of one embodiment thereof, making reference to the accompanying drawings in which:—

Figure 1 is an external view of a device according to the invention comprising three levels of compartments, and consequently three front doors,

Figure 2 is a diagrammatic perspective view of modules grouping the compartments of such a device.

Figure 3 is an exploded view of the inside of the device, mainly illustrating the various parts fitted to the back of the modules, their reading means, and also one type of embodiment of the doors, and

Figure 4 is an electrical diagram of the device.

Referring to the drawings, Figures 1 to 3 show in an enclosure 1 which is normally closed, a plurality of identical modules 2, each one of which groups a plurality of compartments 2a, 2b, 2c, 2d and 2e, each compartment being capable of receiving one of the articles to be distributed.

As Figure 2 more especially shows, the various modules 2 have the shape of rectangular parallelepipeds arranged with their larger dimension vertical. The modules are open over one of their vertical faces or "front face" 13 to provide access to compartments 2a to 2e which are defined by subdivision of the inside volume of module 2 by horizontal partitions 6 and 8 and by a vertical partition 3, which is perpendicular to the front face 13. Thus, the upper compartment 2a is delimited by the horizontal partition 6, by the upper horizontal wall 16 of the module, by the two vertical walls 24 and 25 of the latter which are perpendicular to its front face 13, and by the rear wall 19 of the module, which is vertical and parallel to its front face 13; the intermediate compartments 2b and 2d are delimited by the two horizontal partitions 6 and 8, by the vertical partition 3 and by the walls 24 and 25 of the module; the

rear wall 19 of the module defines the bottom of each of the compartments.

Thus, each module comprises compartments at three levels, the height of the compartments may be different from one level to the other, but all the compartments at an identical level having identical dimensions. Thus, in the example illustrated, the vertical partition 3 is arranged at an equal distance from the walls 24 and 25 of the modules which are situated to left and right of the face 13 respectively.

Each module thus constituted is suspended by the intermediary of a trolley 26 which is integral with its upper wall 16, on a horizontal support rail such as 27 closed on itself in such a way as to define a closed circuit along which the trolley 26 can move carrying the module 2 on a horizontal trajectory in a general direction which is always parallel to its front face 13, which is turned towards the outside of the trajectory.

In the example illustrated, the trolley 26, the vertical axis of symmetry of which coincides with the vertical axis of gravity of the module, has the shape of a T pointed in accordance with the median vertical plane of the module parallel to the front face 13 of the latter, each of the two branches of the T carrying on this plane a roller 28 mounted so as to rotate about an axis which is perpendicular to this plane. The support rail 27, which is integral with the enclosure 1, is hollow and has a rectangular transverse section; towards the bottom it has a horizontal wall 29 which is pierced over the entire length of this rail to form a median slot 30 which allows the passage of the vertical rod of the trolley 26, the rollers of which, 28, are capable of rolling on the inside face of this wall 29, on both sides of the slot 30. If desired, the rolling path of the rollers can be furnished with a material which promotes movement and restricts rolling noises such as PTFE.

On its lower part each module 2 moreover comprises a vertical lug 31 which projects towards the outside in relation to its lower wall 17, which lug 31 is capable of sliding, at the time of movement of the module, by moving the trolley 26 along the upper rail 27, on the inside of a horizontal lower rail 32 which is parallel to the rail 27 and has two vertical flanges 33 and 34, which are parallel and separated by a length which is close to the corresponding dimension of the lug 31, so as to ensure as precise as possible a guidance of the latter in order to preserve in the module 2 its verticality during the course of its movement.

The moving-along of the module in translation compatible with the direction of the rails 27 and 32 is ensured by an endless conveyor made up of two profiled belts or of two superposed horizontal chains 4 and 5 to which each module is fixed by its rear face 19, for example, in the immediate vicinity of its upper wall 16 and at the level of the horizontal partition 8.

The chains or belts 4 and 5 are engaged over at least two sets of two horizontal superposed toothed wheels such as 7 and 9 having a respective common vertical axis 11 and 10 (see Figures 2 and 3); these toothed wheels, at least one per belt or per chain, can advantageously be used to propel the two elements 4 and 5 with an identical motion of translation: in the example illustrated, the wheels 7 and 9 rotated about their common vertical axis 11 by a motor 12. Naturally, any known means can be provided in order to keep the elements 4 and 5 of the conveyor under tension.

The wheels such as 7 and 9 must have a diameter which is compatible with the trajectory of the rear wall 19 of the various modules. Moreover, the two belts 4 and 5 are fixed to the rear face 19 of each module respectively only at one point in order to permit modules placed edge to edge to run rectilinearly. For reasons of symmetry, these two points 35 and 36 must be situated on the same vertical line 37, which coincides with the vertical median of the rear face 19 of the module.

In order to avoid falling of the packages and to guide the modules, the enclosure 1 or a framework which is integral with the latter can comprise on the inside facing each compartment level, one or more bands of suitable material, for example, of vulcanized fibre, which closes the lower part of each compartment level.

In the course of their movement, which corresponds to the motion of translation of the endless conveyor 4-5, the compartments of the various modules are capable of passing one by one behind doors which are arranged in the wall of the enclosure 1, more precisely in the front 15 of the latter, which is accessible to the public, one door being provided per level having dimensions such that when it is open, it gives access only to one compartment of this level at a time.

Thus, in the example illustrated, the front 15 of the enclosure 1 comprises three doors 14a, 14b and 14c, which are capable of providing access to the upper compartments such as 2a, the intermediate compartments such as 2b or 2d, and to the lower compartments such as 2c or 2e respectively.

Each door, in the example illustrated, and more especially in Figure 3, is composed of an aperture having dimensions closely related to the dimensions of the compartments of the corresponding level in the immediate vicinity of the front face 13 of the module, and by a vertical panel which is capable of sliding horizontally behind these apertures to give or not give access to the inside of the enclosure 1 and to the compartments. (For reasons of clarity of the drawing, the slides allowing this sliding have not been illustrated in Figure 3). Each panel is automatically returned to the closed position illustrated in Figure 3 by a return

counter-balance such as 38; it is locked in the closed position by a pair of locks with electric control such as 39a, 39b etc., acting at the level of the upper edge and of the lower edge of each sliding panel, respectively.

For reasons of security and simplification of the electrical circuits which will be described later, the relative position of the various doors in relation to a vertical axis is such that at a given moment, a single compartment coincides exactly with the door which is capable of giving access to it.

Thus, in the example illustrated, if one refers to the vertical axis 40a of the opening corresponding to the door 14a, which coincides with the vertical axis of the front face 13 of the module when the upper compartment 2a of the latter faces the aperture corresponding to the door 14a, the axes 40b and 40c corresponding to the doors 14b and 14c respectively are shifted to the right and left respectively (Figure 1). The shifting of the axes 40b and 40c in relation to the axis 40a, measured horizontally, is, for example, equal to one third of the horizontal dimension of each small compartment such as 2b to 2e are identical. at the level of the front face 13 of the module, that is to say, to one sixth of the corresponding dimension of the latter, since the small compartments 2b to 2e are identical.

Naturally, this value of displacement is given purely by way of indicative example, and other values might give satisfaction; moreover, adaptation of the device to a case where the compartment or compartments of the three levels would have different dimensions, or in a case where the number of levels were to be different from three, would not in any way depart from the scope of the invention.

Each compartment of the device being intended to receive an article and restore it to its owner, each module such as 2 comprises an identifying mark for each of the compartments of which it is composed. These identifying marks are appropriate to each compartment and are made up, for example, on each module, of five coding marks 18a to 18e (see Figure 3), each one being attached to one compartment of this module and arranged on an identical horizontal 41 on the upper part of the rear face 19 of the module. The characteristic coders of the compartments of the various modules are read, at the time the latter move past, by a suitable reading device 20 arranged, for example, on the horizontal line 41 and on the right of the vertical axis 40a of the upper door 14a. Taking into consideration the relative positions of the axes 40a, 40b, 40c of the doors 14a, 14b and 14c and the relative arrangement of the various compartments of the module, the characteristic coder 18a of the upper compartment 2a is situated on the vertical axis 37 of the rear face 19 of the module; from a zone of this rear face 19 close to the right hand face 25 to a zone of this face 19 close to the left hand

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face 24, one encounters in succession the coders 18e corresponding to the compartment 2e, 18d corresponding to the compartment 2d, 18a corresponding to the compartment 2a, 18c corresponding to the compartment 2c, and 18b corresponding to the compartment 2b, two adjacent coders being spaced along the horizontal line 41 by a length which is equal to the distance measured horizontally between the axes 40c and 40a, or 40b and 40a; naturally, the specialist will adapt these sides to each special case of dimensions and number of compartments without departing from the scope of the invention.

The coders 18a to 18e may be of any suitable known type. One may select, for example, a marking of the type capable of magnetic detection, each coder than may be in the form of a piece of cut sheet metal having slots which translate the compartment number binarily; a magnetic reader 20 will then be used. Naturally, one could also use markings for mechanical or optical detection, with the appropriate detectors.

Preferably, however, each compartment will be marked by its own number, and not in relation to its adjacent ones. Numbering will be carried out, for example, in such a way that one passes from one coder to the following one by incrementation or decrementation of one unit.

Means are provided to control the motor 12 and to start or stop the translation of the modules when the coded reference of a compartment coincides with the coded reference in the possession of the consignee of the article which is contained in this compartment.

Here, the means for deriving the coded reference comprise means of associating with each identifying mark of a compartment, that is to say, with each coder such as 18a to 18e, a coded reference which can preferably be modified as desired. Comparison is then carried out between the coded references associated with the identifying mark of the various compartments moving past, that is to say, with the various coders read by the fixed reader 20, and a coded reference appearing, for example, on a card 21 which the consignee of a certain article placed in one of the compartments of the device introduces into a suitable reading device 22, for example, via a slot such as 23, which is arranged in the front 15 of the enclosure 1.

The association of a coded reference with each identifying mark of a compartment, such as a coder, and the comparison between the coded references associated with the identifying mark of compartments moving past and the coded reference which is introduced via the reader 22 is carried out in a central unit with an information base 42 of any suitable type (see Figure 4). This central unit is accessed through one or two reading devices 22 which are accessible from outside, through the reader 20

for reading the coders such as 18a to 18e, through a data input keyboard which primarily permits the coded reference associated with the identifying mark of a compartment to be modified as desired, through reader detecting opening and closing of doors, so that the translation of the modules is possible only when the doors are closed, and by as many micro-contacts for compartment marking as there are compartment levels in each module, that is to say, by three micro-contacts 43a, 43b and 43c here (see Figures 3 and 4).

The central unit 42 controls the operation of the motor 12, which is preferably reversible, in order to induce rotation of the latter and translation of the modules when the coded reference associated with the coder read by the reader 20 does not coincide with the coded reference introduced via the reader 22, and to induce stoppage of the assembly when there is coincidence and when, consequently, the desired compartment is behind one of the doors 14a to 14c of the enclosure 1. The central unit then unlocks the locks 39a or 39b or 39c of this door in order to allow access from the outside to the desired compartment.

As Figure 4 shows, the fact that the module comprising the compartment which is required is stopped behind a door, activates an electrical circuit common to the locks 39a to 39c of the various doors, and it is the micro-contacts 43a to 43c which, by their opening or their closing, depending on the position of the compartments of the stopped module, permit opening of the desired door by prohibiting that of the other doors; each micro-contact 43a, 43b and 43c is in fact inserted into the respective circuit 44a, 44b and 44c of each lock or group of locks 39a, 39b and 39c, these three circuits 44a to 44c being placed in parallel; a single compartment can be placed opposite a door at a given moment, and detection via the micro-contact 43a to 43c of the door in front of which a compartment is stopped permits the opening of this door to be controlled.

Thus, in the example illustrated in Figure 4, the micro-contact 43c detects the stopping in front of the door 14c of one of the lower compartments 2c or 2e of the module, and closes the circuit of the locks 39c of this lower door 14c, thus authorizing its opening when the micro-contacts 43a and 43b are themselves open. (It will be remembered that the stopping of the compartment 2c or the compartment 2e in front of the door 14c is for its part controlled by the central unit 42 when the corresponding coder 18c or 18e is in coincidence with the reader 20).

The various micro-contacts 43a to 43c are actuated by stops 45a, 45b, 45c, 45d and 45e projecting towards the outside in relation to the rear face 19 of the module, one stop being provided per compartment of the latter. The stops corresponding to compartments of an identical level are arranged on a common

horizontal line; the stop 45a which corresponds to the compartment 2a is thus arranged on a horizontal line 45a parallel to the horizontal line 41 of the coders 18a to 18e, the stops 45b and 45d corresponding to the compartments 2b and 2d respectively are arranged on a horizontal line 46b, parallel and a vertically below line 46a, and the two stops 45c and 45e which correspond go the lower compartments 2c and 2e are arranged on a third horizontal line 46c, parallel to and vertically below 46a and 46b. The micro-contacts 43a, 43b and 43c are themselves arranged on these horizontal lines 46a, 46b and 46c respectively, and on the right of the respective vertical axis of the doors 14a, 14b and 14c respectively.

Besides the functions already recited, the central unit 42 intervenes, when the desired compartment is stopped in front of a door, to induce the lighting of small luminous display panels such as 47a to 47c indicating the door to be opened, as well as a series of small panels indicating, for example, that the apparatus is in operation, that the coded reference which is introduced via the reader 22 does not correspond to any coded reference introduced into the apparatus to begin with. Besides, the central unit 42 induces, when the module is stopped in the desired position behind the doors, the blocking of it by an electromagnet 48 which is capable of acting on bosses of magnetic material 49a, 49b, 49c, 49d and 49e, which the rear face 19 of each module has for this purpose, when the module is stopped in the correct position.

The various bosses 49a to 49e, corresponding to each of the compartments 2a to 2e of the module respectively, are arranged on a common horizontal line 50 parallel to the horizontal line 41 and on which the electromagnet 48 is likewise arranged. The latter is, for example, situated on the right of the vertical axis 40a of the upper door 14a and, taking into consideration the relative position of the doors 14a to 14c, the relative position of the compartments 2a to 2e and the relative position of the reader 20, of the micro-contacts 43a to 43c and of the electromagnet 48, the coders 18a to 18e, the stop 45a to 45e and the bosses 49a to 49e corresponding to an identical compartment 2a to 2e respectively are situated respectively on a common vertical on the rear face 19 of the module 2.

Such a device can naturally be subject to numerous variations without there being any departure from the scope of the invention, because of its numerous possible applications: it can in fact be used for the distribution of postal or non-postal parcels, or even in a cloakroom or as an automatic left-luggage office, in which case the user takes possession of the card 21 or the key which will give him access again to his property at the time when he places the latter in one of the marked compartments such as 2a to 2e.

For example of the distribution of parcels, the method of use of the apparatus is as follows.

In the first instance, the superintendent introduces the package to be distributed into one of the empty compartments 2a to 2e of the apparatus via an appropriate door, and introduces into the memory of the central unit a datum reference appropriate to the consignee of the package, for example, his customer account number, in order to associate it as a coded reference with the identifying mark of the compartment into which he introduces the package.

The entry of the number of this compartment into the memory device of the central unit 42 is generated by the reader 20, the coders such as 18a to 18e which are fixed to the back of each module translating directly into binary code the number of the compartment. The entry of the customer account number itself is effected with the aid of the keyboard 51, which is inaccessible to the public, and which is in a place which is locked, such as 52. If need be, securities can be provided to lock the keyboard 51 in order to restrict access to it to the sole owner of a special code which can be modified, if need be, in order to solve problems of loss and theft.

Naturally, with this keyboard 51, which can be of any suitable known type, there can be associated various known devices, more especially a visualization unit which picks up the customer account number introduced.

Means are likewise provided to permit the superintendent to induce the passing of the modules step by step with the doors open.

The central unit 42 likewise comprises means of memorizing a period of time in such a way that a package which is not withdrawn does not immobilize a compartment for too long a period. For example, to each compartment there is assigned a counter of a capacity equal to 15, which the registration of the customer account number initialises at 15. Any new intervention of the person delivering the article reduces all the counter by one unit. In the case where a counter equals 1, means are provided for the central unit 42 to display an appropriate signal when the compartment is opposite a door and indicate to the superintendent that he must empty this compartment.

Having been notified that he can take possession of his package, the consignee of the latter turns to the distributor when he has time to do so, and introduces into it a card which is in his possession, for example, bearing his account number, via a slot 25.

The reader 22 transmits this account number to the central unit 42. The central logic system then carries out the search for the address, that is to say, in practice, of the coder such as 18a to 18e with which this account number is associated.

If this number has been associated with the

address of a compartment, the computer compares the number of the compartment which is stopped opposite a door with the number of the compartment to be brought in front of a door.

5 If this number coincides, the central unit brings about opening of the door.

10 If these numbers are different, the central unit brings about starting of the motor 12 in one direction or the other, depending upon the position of the compartment which is required, in order to bring the latter into position in front of a door in the shortest possible time.

15 In the event of non-existence of the customer account number in the memory device, the central logic system informs the customer that his package has not yet been delivered.

20 When the compartment required arrives in front of the door, the logic system unlocks the lock, notifies the customer of this, and illuminates one of the marks such as 47a to 47c, indicating to him the unlocked door behind which is his package.

25 As has been stated above, in order to simplify the operation of the central unit whilst avoiding the problem of marking by the latter of the door which has to be opened, the central unit stops the motor 12, locks the blocking electromagnet 48, and unlocks the opening circuits 44a to 44c of the three doors when the desired coder such as 18a to 18e is facing the reader 20. The three circuits 44a to 44c are placed in parallel and each one comprises the micro-contact such as 43a to 43c which, closed by the stop such as 45a to 45e corresponding to the compartment which is stopped in front of a door, induces the unlocking of the latter.

40 When the customer has withdrawn his package, the adjusting counter-balance such as 38 re-closes the door, a closing contact (not represented) being provided to release the locking of the locks such as 39a to 39c of this door and to unlock the access to the "customer (client)" card reader 22. In fact, a card can preferably be read only when all the doors are locked.

45 In a case where one card is introduced when any one of the doors is open, the central unit 42 causes the display of an endorsement such as "please close the doors".

50 Naturally, choice of the shape, nature and dimensions of the various constituents of the distributor, which may be very different according to the destination of the latter, is left to the discretion of the specialist who has to determine them in each particular case. In particular, the rails such as 27 and 32 can be produced in a different way from that which has been described, and more especially, can be omitted if the articles to be distributed are particularly light. The compartments such as 2a to 2e, moreover, as well as the modules 2, can have a shape other than parallelepipedic, being able, for example, to consist of supports

adapted to the articles which they have to receive; according to circumstances, the means normally prohibiting access to the compartments can be composed of doors such as 14a to 14c of the enclosure 1, sliding or pivoting, as in the example illustrated, or by individual doors arranged on each compartment or even by various means of blocking of the article in the compartments.

70 Several optional attachments can likewise be provided, depending more especially on the use of the device. For example, in a case of postal sale, the device can be provided with a box 53 permitting the return of articles which do not give their consignee, satisfaction.

75 In each case, the means for the user to introduce into the apparatus via the appropriate reader 22, a coded reference with which the central unit 42 compares the coded references associated with the identifying marks of the various compartments, can be different from those which have been described, that is to say, from the magnetic card 21 and the appropriate reader 22. The magnetic reading can in fact be replaced, according to the circumstances, by optional or mechanical readers. Whatever the circumstances, the card 21 or more generally, the means of access to one compartment of the device by the consignee of an article contained in a compartment of the latter can be kept or destroyed by the apparatus.

WHAT WE CLAIM IS:-

1. A device for storing deposited articles so that they can be retrieved only by a consignee offering a correct coded reference, comprising:-

- an endless conveyor,
- a driving means for propelling the conveyor,
- a plurality of compartments, which are normally inaccessible from the outside of the device, fixed side by side along the conveyor, each compartment being capable of receiving an article,
- an identifying mark associated with each compartment,
- means for reading the identifying marks of the compartments, the reading means being fixed relative to the conveyor so that it reads each identifying mark as the conveyor carries the compartments past the reading means,
- means for producing a coded reference associated with each identifying mark,
- means for comparing the coded reference associated with an identifying mark with a reference offered by the consignee,
- means for stopping the conveyor when a coded reference and the reference offered by the consignee coincide, and
- means for providing access from the outside of the device to the compartment associated with the identifying mark which is associated with the coded reference which coincides with the reference offered by the consignee.

2. A device according to Claim 1, comprising means of modifying, as desired, the

coded reference associated with each identifying mark.

3. A device according to Claim 1 or 2, comprising a plurality of identical modules, each one of which comprises a plurality of compartments, the modules being fixed to the conveyor and positioned thereon along the direction of the motion of translation thereof.

4. A device according to claim 3, wherein the identifying marks of the various compartments of one module comprise coders, one coder being provided per compartment of the module, the coders being fixed to the module and positioned along a line which is parallel to the module and positioned along a line which is parallel to the direction of translation of the conveyor, the fixed means of reading comprising at least one fixed reader arranged on the path of movement of each coder.

5. A device according to Claim 3 or 4, wherein each module comprises a plurality of compartments which are positioned along the direction of the motion translation of the conveyor.

6. A device according to Claim 3, 4, or 5, wherein each module comprises a plurality of compartments at different levels, which are positioned along a direction which is perpendicular to the direction of the motion of translation of the conveyor.

7. A device according to Claim 6, wherein the compartments at the same level are identical.

8. A device according to Claim 6 or 7, wherein the compartments have different dimensions from one level to the other.

9. A device according to any one of Claims 6 or 7, comprising an enclosure around the modules, the enclosure having at each level a door behind which the compartments of the level move, each door being capable of giving access to one compartment at a time when it is open.

10. A device according to Claim 9, wherein the compartments of each module and the doors are arranged respectively in such a way that at one time only one compartment is accessibly aligned with a door.

11. A device according to Claim 10, comprising means of locking each door in a closed position when no compartment is in a stopped position opposite it, and of allowing opening of the door opposite which a compartment is stopped.

12. A device according to claim 11, wherein the means of locking and allowing opening comprises means for detection of the relative position of the compartments of each level in relation to the corresponding door.

13. A device according to Claim 12, wherein the means for detection of the relative position of the compartments of each level in relation to the corresponding door comprise contact stops, which are fixed to each module, one contact stop being provided per

compartment, and fixed micro-contacts which are arranged on the path of movement of the stops, each stop corresponding in position to a compartment of a module and each micro-contact being associated with the respective door for the compartment in such a way that the micro-contact corresponding to each door is actuated when the respective compartment is stopped opposite the door.

14. A device according to Claim 13, wherein the stops are arranged on a plurality of lines, each one of which corresponds to one level of compartments, there being one single micro-contact per line and per door.

15. A device according to any one of Claims 9 to 14, comprising means of preventing the translation of the modules when the compartment having the identifying mark associated with the coded reference coinciding with the offered reference is stopped opposite a door and when the door is open.

16. A device according to Claim 15, wherein the means comprises a plurality of bosses of magnetic material, one boss being provided per compartment of a module, which are fixed to the latter and positioned along a line which is parallel to the direction of translation, at least one fixed electromagnet being arranged on the path of movement of the bosses, and means for exciting the electromagnet(s) when the compartment having the identifying mark associated with the coded reference which coincides with the offered reference is stopped in front of a door.

17. A device according to Claim 16, wherein the means for exciting the electromagnet comprises, in the electrical circuit of the latter, means for closing the circuit when the compartment is stopped facing a door, in order to close and open the door, when the door is open or closed respectively.

18. A device according to Claim 17 when appended to Claim 13, the means for exciting the electromagnet are coupled to the means for detection of the relative position of the compartments in relation to the doors.

19. A device according to any one of Claims 3 to 18, comprising means for guiding of the modules in their motion of translation.

20. A device according to Claim 19 wherein each module comprises on its upper part and vertically above its centre of gravity, a suspension trolley mounted on a fixed upper rail, parallel to the path of movement of the centre of gravity in the motion of translation, each trolley being capable of being moved longitudinally on the rail in the motion of translation.

21. A device according to Claim 19 or 20, wherein each module comprises on its lower part of a projection which slides on the inside of a fixed lower rail parallel to the path of movement of the centre of gravity in the motion of translation.

22. A device according to any one of

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- Claims 3 to 18, wherein each module is connected to the conveyor at a plurality of points on its rear wall, the fixing points being situated on a common line perpendicular to the direction of the motion of translation.
- 5 23. A device according to any preceding Claim, comprising means for memorizing the date of filling of each compartment.
- 10 24. A device according to any preceding Claim, comprising means for introducing the offered reference.
25. A device according to Claim 24, wherein the means comprises at least one magnetic card reader.
26. A device according to Claim 1 substantially as described herein with reference to the accompanying drawings.
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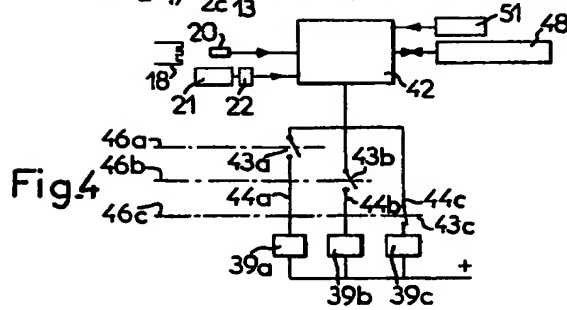
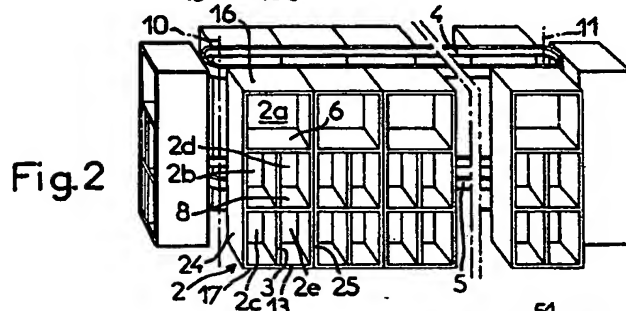
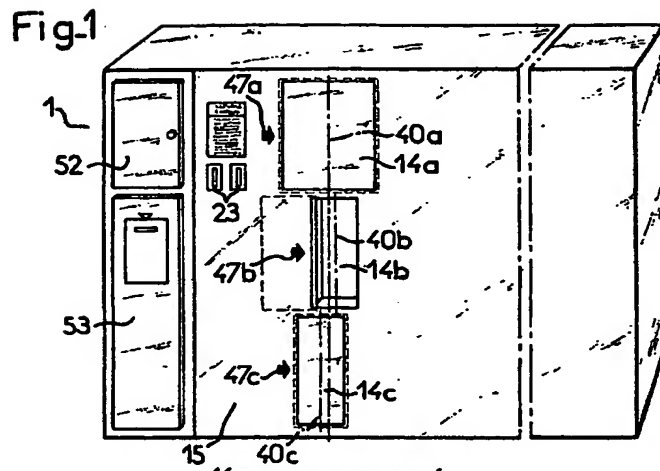


Fig.3

